
Serial No. 10/619,688

Reply to Office Action of March 28, 2005

Remarks:

Claims 1-25 are pending in this application, and are in their original form.

Claims 1-14 and 17-25 stand rejected under 35 U.S.C. 102(b) as being anticipated by Horner, U.S. Patent No. 4,093,188. Claims 1-6, 8-11, 13-14, and 17-25 stand rejected under 35 U.S.C. 102(b) as being anticipated by EP 1067352 A1, and stand further rejected under 35 U.S.C. 102(b) as being anticipated by Doom, U.S. Patent No. 4,072,296. Applicant respectfully traverses these rejections.

Independent claim 1 is directed to a static mixer comprising a first grid having one or more crossing elements and one or more slots adjacent thereto, and a second grid having one or more crossing elements and one or more slots adjacent thereto, wherein the crossing elements of the first grid are arranged at intersecting angles to the crossing elements of the second grid, and wherein at least one elongated connector is positioned between and secured to the crossing elements of the first and of the second grids.

Independent claim 18 is directed to a method of making a static mixer, the method including the steps of providing at least two grids, positioning one or more crossing elements and one or more slots adjacent each crossing element in a first grid and in a second grid, and arranging the crossing elements of the first at intersecting angles to the crossing elements of the second grid, positioning at least one connector between the crossing elements of the first grid and of the second grid, and securing the connector to the crossing elements.

Independent claim 24 is directed to a static mixer assembly comprising a conduit having one or more static mixers positioned therein, wherein each static mixer comprises the elements recited in claim 1.

Serial No. 10/619,688

Reply to Office Action of March 28, 2005

Turning first to the rejection based on Horner, a mixing element is disclosed, comprising two banks of semi-elliptical baffle plates arranged on either side of a central shaft. Each bank comprises two different sets of baffle plates (38, 40), each set having different angles of inclination with respect to the shaft. These baffle plates simply do not intersect. Further, the baffle plates do not comprise grids, and are not the crossing elements of the present invention. Instead, the baffles are solid plates which are truncated ellipses or semi-ellipses, and which can be flat, curved, undulating or angled plates, disposed on either side of a central shaft(see Col. 5, lines 40-43). The solid configuration of these baffle plates is most clearly seen in FIGS. 3, 5 and 7. These solid plate baffles are clearly not intersecting grids of crossing elements and slots adjacent to the crossing elements, as recited in the present claimed invention.

Accordingly, as Horner neither teaches nor suggests a mixing element comprising intersecting grids of crossing elements and slots adjacent each crossing element in the manner claimed, a method of making such a mixing element, or a static mixer incorporating such an element, Applicant submits that independent claims 1, 18 and 24 are novel and define over Horner, as do claims 2-14, 17, 19-23, and 25, depending either directly or indirectly therefrom. It is therefore requested that this rejection be withdrawn.

Turning next to reference EP 1067352, this reference teaches a mixing insert which is first formed from a number of intersecting crossing grid elements which are presumably welded together at the intersections thereof. A bundle of pipes is then pushed through elliptical apertures within the crossing elements, and attached to the mixing insert. By contrast, the elongated connectors of the present claimed invention are positioned between the crossing elements of the first and second grids. Unlike the pipes in EP '352 which extend through apertures within the crossing elements thereof, the connectors of the present invention do not extend through the crossing elements themselves. Claim 1 recites "at least one elongated connector positioned between and secured to said crossing elements of said first grid and said crossing elements of said second grid." Claim 18 recites "positioning at least one connector between said crossing elements of said first grid and said crossing

Serial No. 10/619,688Reply to Office Action of March 28, 2005

elements of said second grid". Claim 24 recites "at least one elongated connector positioned between and secured to said crossing elements of said first grid and said crossing elements of said second grid."

Accordingly, as EP '352 neither teaches nor suggests a mixing element having at least one elongated connector positioned between the crossing elements of the first and second grids in the manner claimed, a method of making such a mixing element, or a static mixer incorporating such an element, Applicant submits that independent claims 1, 18 and 24 are novel over EP '352, as are claims 2-6, 8-11, 13-14, 17, 19-23 and 25, which depend either directly or indirectly therefrom. It is therefore requested that this rejection be withdrawn.

Finally, Doom is directed to a mixing element mounted within a conduit, the mixing element comprising a number of baffles attached to a central support member extending along the longitudinal axis of the conduit. These baffles each comprise a pair of mutually orthogonal hemi-elliptical solid blades positioned on and attached to opposed sides of the support member. (See in particular FIGS. 1 and 3.) These solid blade baffles simply do not intersect, and do not comprise grids, nor are they grids having crossing elements and slots adjacent to each crossing element. The "cross member" 36 discussed in Doom is a bar attached to the conduit adjacent one end thereof, and extending in a direction transverse to the longitudinal axis of the conduit. As such, this cross member 36 is adapted to receive one end of the baffle assembly to stabilize its orientation within the conduit. Cross member 36 does not correspond in any manner to the crossing elements of the present invention.

Accordingly, as Doom neither teaches nor suggests a mixing element comprising intersecting grids of crossing elements and slots adjacent each crossing element, a method of making such a mixing element, or a static mixer incorporating such an element, Applicant submits that independent claims 1, 18 and 24 are novel over Doom, as are independent claims 2-6, 8-11, 13-14, 17, 19-23 and 25, which depend either directly or indirectly therefrom. It is therefore requested that this rejection be withdrawn.

Serial No. 10/619,688

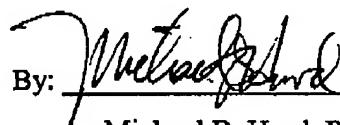
Reply to Office Action of March 28, 2005

Claims 15 and 16 have been objected to as being dependent upon a rejected base claim, but have been indicated as being allowable if rewritten in independent form. However, in view of the above comments, it is believed that the underlying independent claims are allowable, and accordingly, it is believed that these claims need not be rewritten in order to be allowable.

In light of the foregoing, it is believed that the Applicant is entitled to a Notice of Allowance, and such is respectfully requested. Any additional fee due in connection with this amendment should be applied against our Deposit Account No. 19-0522.

Respectfully submitted,
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